Bridge Culvert Inspection

Bridge File Number	01745 -1 Bridge Culvert	Form Type	CULE
Year Built	1955	Lot No.	1
Bridge or Town Name	PINCHER CREE	Inspector Name	Calvin Roberts
Located Over	TRIBUTARY TO PINCHER CREEK, 2.12.31.1, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	785:02 C1 4.784	Assistant Class	
Water Body Cl./Year		Inspection Date	28-Nov-2012
Navigabil. Cl./Year		Data Entry By	Lauren Korte
Legal Land Location	NW SEC 31 TWP 6 RGE 29 W4M	Data Entry Date	19-Dec-2012
Longitude, Latitude	-113:54:11, 49:31:13	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	02-Dec-2012
Contract Main. Area	CMA26	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	9.3 / 30 deg. (RHF)	Dept. Review Date	27-Dec-2012
AADT/Year	1,890 / 2011 (A)	Follow-Up By	
Road Classification	RAU-210-110		
Detour Length (km)	8		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	U/S	3886	2490	SP	1			ELLIPSE
1	MAIN	3962	2438	BP	24.4			RECTANGLE
Special Features		VERT TIMBER STRUTS						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West ditch.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	
Vertical Alignment		7	7	
Roadway Width (m)	9.800			
Embankment		7	7	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **4**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	
Collar		6	6	Some honeycombing around collar.
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		N	N	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: U/S, Span (mm): 3886, Rise (mm): 2490, Type: SP**)				
Barrel Last Accessible Date	28-Nov-2012			Design=3886 X 2490. Sp CSP culverts.
Special Features				
Special Feature			7	150 X 00 TT struts 0.9m O/C.
(Type : **VERT TIMBER STRUTS**)				
Special Feature				
(Type :)				
Roof		6	2	Reverse curvature in Rings 4,5,6.
Measured Rise (mm)	1822			
Measured At Ring No.	4			
Sag (mm)	668			
Percent Sag	27			
Sidewall		6	4	
Measured Span (mm)	4061			
Measured At Ring No.	4			
Deflection (mm)	175			
Percent Deflection	5			
Floor		6	4	
Bulge (mm)	70			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		5	4	Sealed with spray foam.
Separation (mm)	90			
Longitudinal Seams		X	3	Up to 23mm gap along roof seam plates, sides and floor OK. Rise measurements taken from South side.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		X	5	Soil corrosion @ upper seams.
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: U/S, Span (mm): 3886, Rise (mm): 2490, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel Extension General Rating		**6**	**3**	Increase 1 point for struts.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1981, Rise (mm): 2438, Type: BP, Cell Sequence: 1**)				
Barrel Last Accessible Date	28-Nov-2012			South cell of concrete box.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	6	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		6	6	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		6	6	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		5	5	Foam sealed.
Separation (mm)	90			
Longitudinal Seams		X	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1981, Rise (mm): 2438, Type: BP, Cell Sequence: 1**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**5**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1981, Rise (mm): 2438, Type: BP, Cell Sequence: 2**)				
Barrel Last Accessible Date	28-Nov-2012			Concrete box. North cell.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		2	6	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		4	6	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		4	6	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		4	5	
Separation (mm)	0			
Longitudinal Seams		3	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		5	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	NEG			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1981, Rise (mm): 2438, Type: BP, Cell Sequence: 2**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**3**	**6**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	400			
Scour Protection		5	5	Localized scour hole, well rip rapped.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	
Bank Stability		6	6	
HWM (m below Top of Culvert)				No visible HWM.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**6**	**6**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2013	Replace SPCSP pipe.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**33.3/33.3**	**Sufficiency Rating (Last/Now) (%)**	**45.7/44.0**	Est. Repl. Yr	2013	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	2 Notifications sent to at Lethbridge Dec 3/12 advising of roof in SP rated 2- Barrel general rating=3 for struts.	Department Comments	

Maintenance Reviewed By		Date		Estimated Total	0
Proposed Long-Term Strategy					
On 3-Year Program (Y/N)					
Proposed Action					
Previous Inspector's Name	Garry Roberts	Previous Assistant's Name			
Next Inspection Date	28-Feb-2016	Previous Inspection Date	07-Sep-2009		
Inspection Cycle (Default) (months)	39				
Comment					